

[illegible]

FIG. 1

195

196

MCB Address:
0x0070030

SPR Address: 0x0030

Reset value: 0x00000000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
I n t O n l y	Any value															SleepCNT															

FIG. 2A

197

FIG. 2A

200

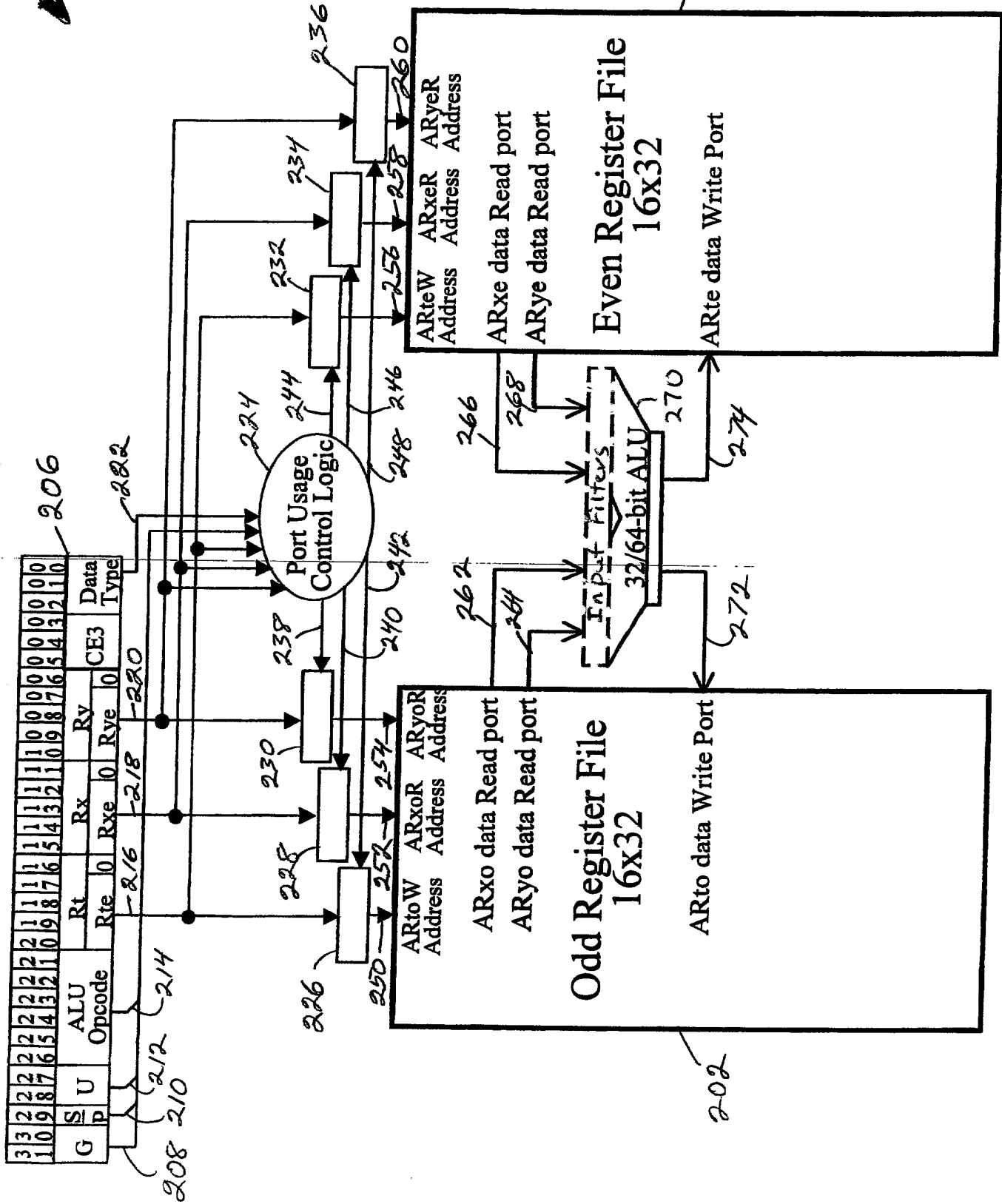
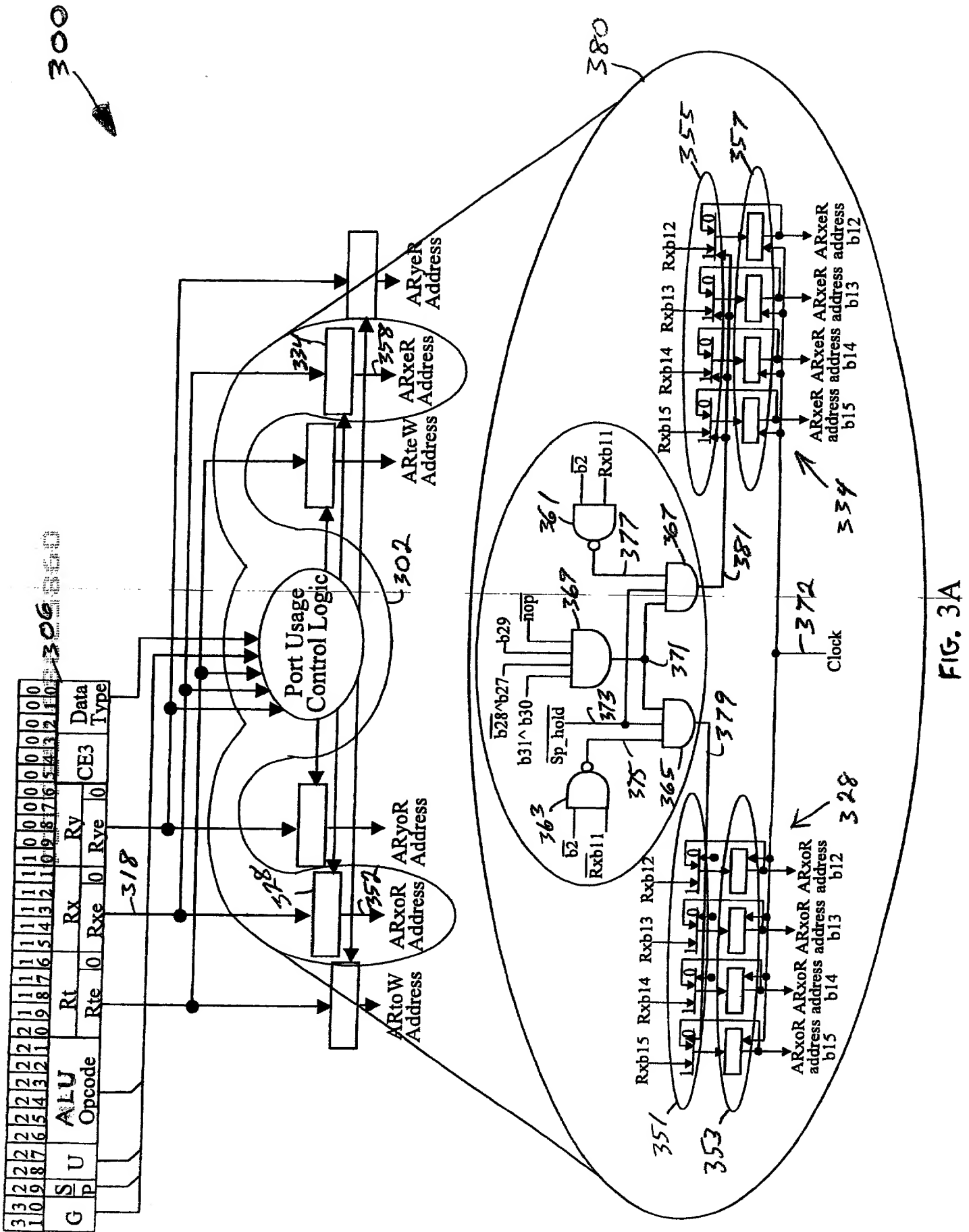


FIG. 2B



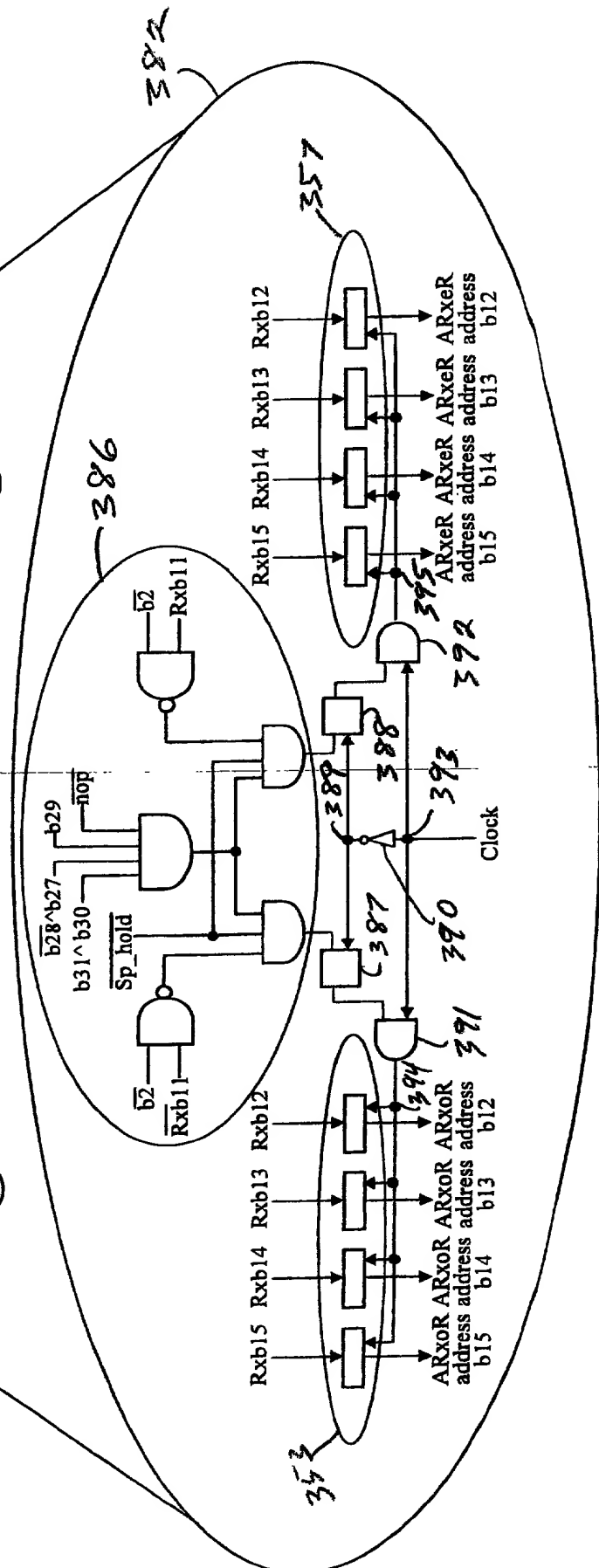
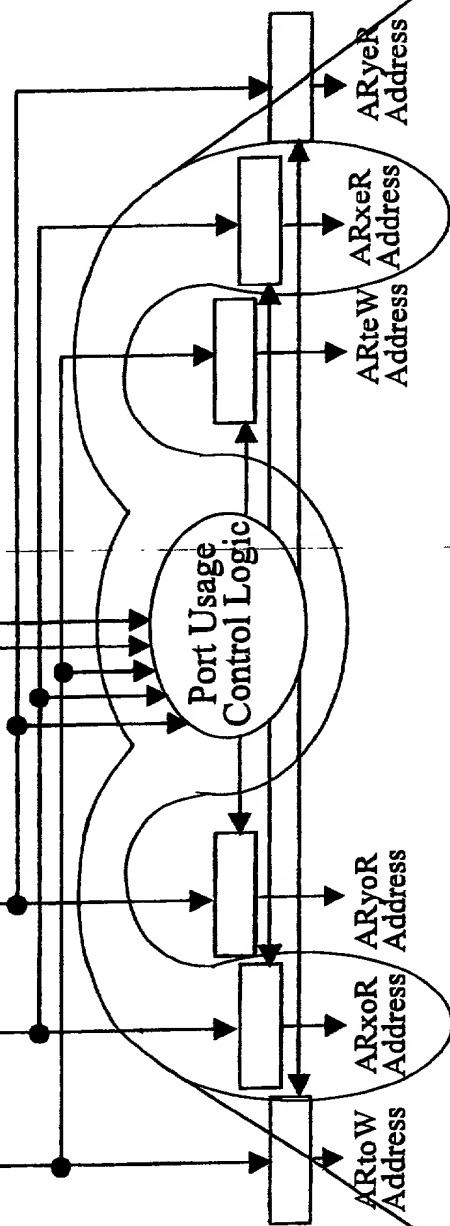
[illegible]

FIG. 3B

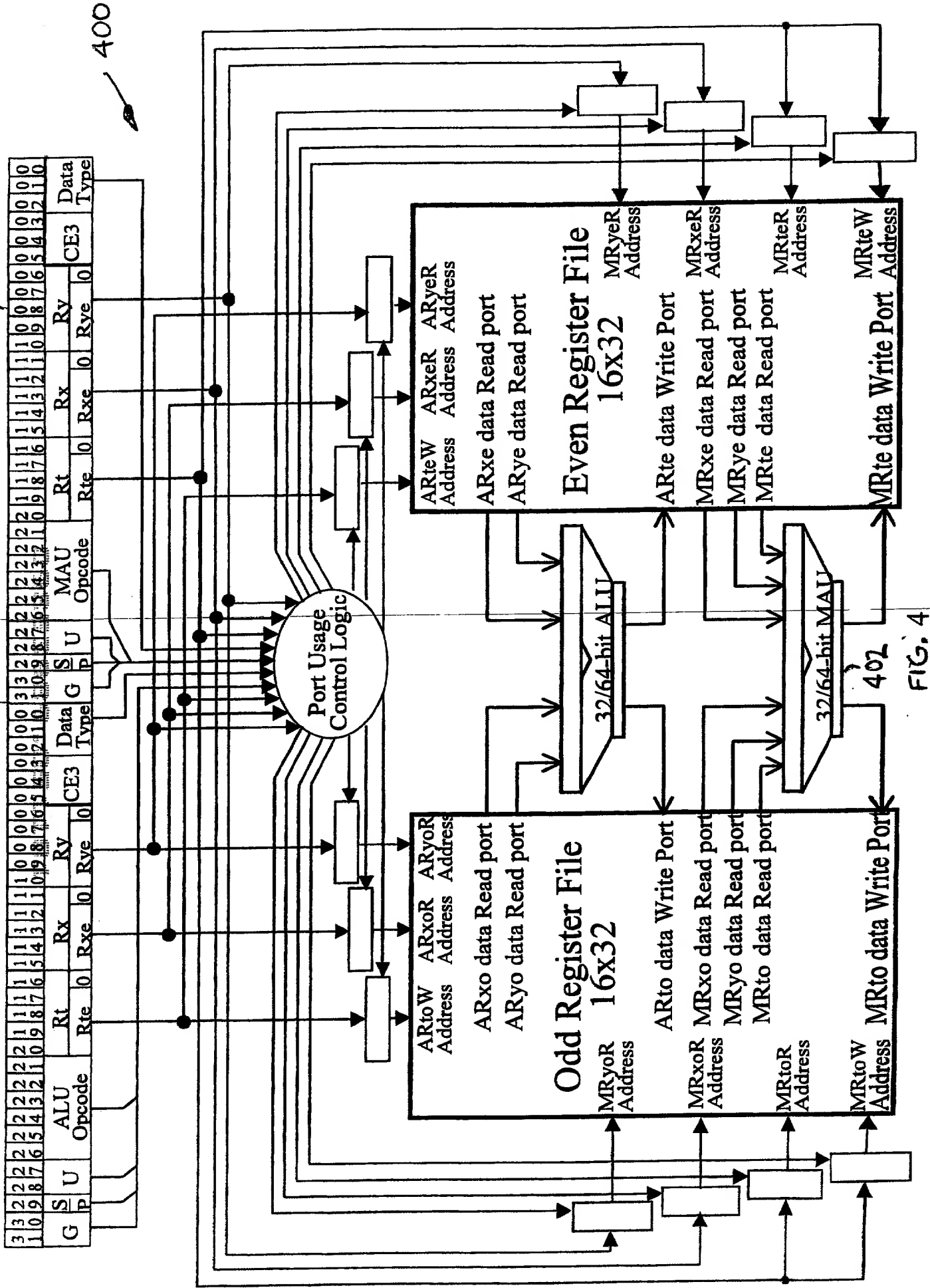


FIG. 4

Country	Year	Population (millions)	Urban population (millions)	Urban population (%)	Population density (per sq km)	Urban population density (per sq km)	Population growth rate (%)	Urban population growth rate (%)	Population growth rate (%)	Urban population growth rate (%)	Population growth rate (%)	Urban population growth rate (%)
Algeria	1980	12.5	4.5	36	100	100	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	1985	13.5	5.5	41	110	110	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	1990	14.5	6.5	45	120	120	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	1995	15.5	7.5	48	130	130	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2000	16.5	8.5	51	140	140	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2005	17.5	9.5	54	150	150	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2010	18.5	10.5	57	160	160	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2015	19.5	11.5	59	170	170	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2020	20.5	12.5	61	180	180	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2025	21.5	13.5	63	190	190	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2030	22.5	14.5	64	200	200	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2035	23.5	15.5	66	210	210	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2040	24.5	16.5	67	220	220	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2045	25.5	17.5	69	230	230	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2050	26.5	18.5	70	240	240	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2055	27.5	19.5	71	250	250	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2060	28.5	20.5	72	260	260	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2065	29.5	21.5	73	270	270	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2070	30.5	22.5	74	280	280	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2075	31.5	23.5	75	290	290	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2080	32.5	24.5	76	300	300	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2085	33.5	25.5	76	310	310	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2090	34.5	26.5	77	320	320	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2095	35.5	27.5	77	330	330	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2100	36.5	28.5	78	340	340	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2105	37.5	29.5	79	350	350	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2110	38.5	30.5	79	360	360	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2115	39.5	31.5	80	370	370	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2120	40.5	32.5	80	380	380	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2125	41.5	33.5	81	390	390	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2130	42.5	34.5	81	400	400	1.5	1.5	1.5	1.5	1.5	1.5
Algeria	2135	43.5	35.5									

D Pack - 502

Integer Data Packing

000 = 4 Bytes (4B)

001 = 2 Halfwords (2H)

010 = 1 Word (1W)

010 = Invalid (INV)
011 = Reserved

100 = 8 Bytes (8B)

101 = 4 Halfword

504

00 = ALU

01 = MAU

10 = DSU

11 = Reserved

523627

FIG. 5A

Description

The sum of source registers Rx and Ry is stored in target register Rt.

Syntax/Operation

Rt, Rx, Ry ← Rxe, Rye

520

Instruction	Operands	Operation	ACF
ADD.[SP][AM].1D	Rte, Rxe, Rye	Rto Rte ← Rxo Rxe + Ryo Rye	Doubleword
[TF].ADD.[SP][AM].1D	Rte, Rxe, Rye	Do operation only if T/F condition is satisfied in F0	None
ADD.[SP][AM].1W	Rt, Rx, Ry	Rt ← Rx + Ry	Word
[TF].ADD.[SP][AM].1W	Rt, Rx, Ry	Do operation only if T/F condition is satisfied in F0	None
ADD.[SP][AM].2W	Rte, Rxe, Rye	Rto ← Rxo + Ryo Rte ← Rxe + Rye	Dual Words
[TF].ADD.[SP][AM].2W	Rte, Rxe, Rye	Do operation only if T/F condition is satisfied in F0	None
ADD.[SP][AM].2H	Rt, Rx, Ry	Rt.H1 ← Rx.H1 + Ry.H1 Rt.H0 ← Rx.H0 + Ry.H0	Dual Halfwords
[TF].ADD.[SP][AM].2H	Rt, Rx, Ry	Do operation only if T/F condition is satisfied in F0	None
ADD.[SP][AM].4H	Rte, Rxe, Rye	Rto.H1 ← Rxo.H1 + Ryo.H1 Rto.H0 ← Rxo.H0 + Ryo.H0 Rte.H1 ← Rxe.H1 + Rye.H1 Rte.H0 ← Rxe.H0 + Rye.H0	Quad Halfwords
[TF].ADD.[SP][AM].4H	Rte, Rxe, Rye	Do operation only if T/F condition is satisfied in F0	None
ADD.[SP][AM].4B	Rt, Rx, Ry	Rt.B3 ← Rx.B3 + Ry.B3 Rt.B2 ← Rx.B2 + Ry.B2 Rt.B1 ← Rx.B1 + Ry.B1 Rt.B0 ← Rx.B0 + Ry.B0	Quad Bytes
[TF].ADD.[SP][AM].4B	Rt, Rx, Ry	Do operation only if T/F condition is satisfied in F0	None
ADD.[SP][AM].8B	Rte, Rxe, Rye	Rto.B3 ← Rxo.B3 + Ryo.B3 Rto.B2 ← Rxo.B2 + Ryo.B2 Rto.B1 ← Rxo.B1 + Ryo.B1 Rto.B0 ← Rxo.B0 + Ryo.B0 Rte.B3 ← Rxe.B3 + Rye.B3 Rte.B2 ← Rxe.B2 + Rye.B2 Rte.B1 ← Rxe.B1 + Rye.B1 Rte.B0 ← Rxe.B0 + Rye.B0	Octal Bytes
[TF].ADD.[SP][AM].8B	Rte, Rxe, Rye	Do operation only if T/F condition is satisfied in F0	None

FIG. 5B

MPYA - Multiply Accumulate

FIG. 6A

Encoding									
31	30	29	28	27	26	25	24	23	22
Group	S/P	Unit	MA	Upcode	Rte	0		Rx	Ry
C=3	MP	ack							

Syntax/Operation

Instruction	Operands	Operation	ACF
MPYA.[SPIM.1][SUW]	Rte, Rx, Ry	Do operation below but do not affect ACFs	None
MPYA[CNVZ].[SPIM.1][SUW]	Rte, Rx, Ry	$Rto \leftarrow Rte \leftarrow (Rx * Ry)$	F0
[TF].MPYA.[SPIM.1][SUW]	Rte, Rx, Ry	Do operation only if T/F condition is satisfied in ACFs	None
Dual Halfwords			
MPYA.[SPIM.2][SUH]	Rte, Rx, Ry	Do operation below but do not affect ACFs	None
MPYA[CNVZ].[SPIM.2][SUH]	Rte, Rx, Ry	$Rto \leftarrow Rto + (Rx.H1 * Ry.H1)$ $Rte \leftarrow Rte + (Rx.H0 * Ry.H0)$	F1 F0
[TF].MPYA.[SPIM.2][SUH]	Rte, Rx, Ry	Do operation only if T/F condition is satisfied in ACFs	None
Quad Bytes			
MPYA.[SPIM.4][SUB]	Rte, Rx, Ry	Do operation below but do not affect ACFs	None
MPYA[CNVZ].[SPIM.4][SUB]	Rte, Rx, Ry	$Rto.H1 \leftarrow Rto.H1 + (Rx.B3 * Ry.B3)$ $Rto.H0 \leftarrow Rto.H0 + (Rx.B2 * Ry.B2)$ $Rte.H1 \leftarrow Rte.H1 + (Rx.B1 * Ry.B1)$ $Rte.H0 \leftarrow Rte.H0 + (Rx.B0 * Ry.B0)$	F3 F2 F1 F0
[TF].MPYA.[SPIM.4][SUB]	Rte, Rx, Ry	Do operation only if T/F condition is satisfied in F0	None

FIG. 6B

Arithmetic Scalar Flags Affected (on least significant operation)

C = Not affected

N = MSB of result

V = Not affected

Z = 1 if result is zero, 0 otherwise

Cycles: 2

Arithmetic Execution Unit

00 = ALU

01 = MAU

10 = DSU

11 = Reserved

b2c b6 b7

Instruction Group

00 = Reserved

01 = Flow Control

10 = Load/Store (LU, SU)

11 = Arithmetic/Logical (ALU, MAU, DSU)

3

FIG. 6C

Mpack - Multiply Data Packing

000 = Reserved

001 = 2 Halfwords (2H)

010 = 1 Word (1W)

011 = Reserved

100 = Reserved

101 = 4 Halfwords (4H) for MPYH and MPYL

110 = Reserved

111 = Reserved

096970

SP/PE Select

SHO

110

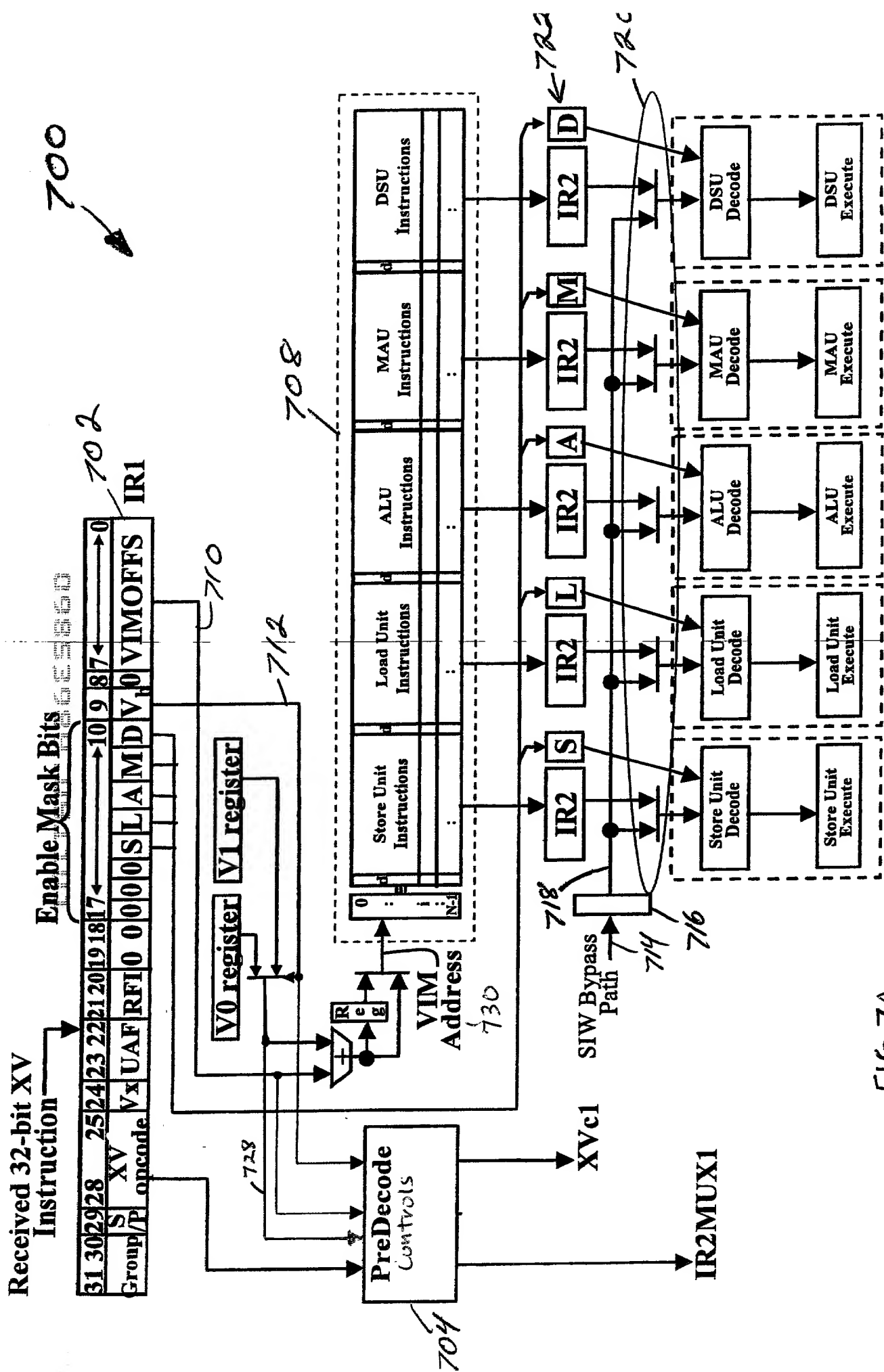


FIG. 7A

Received 32-bit XV2 Instruction

FIG. 8

800

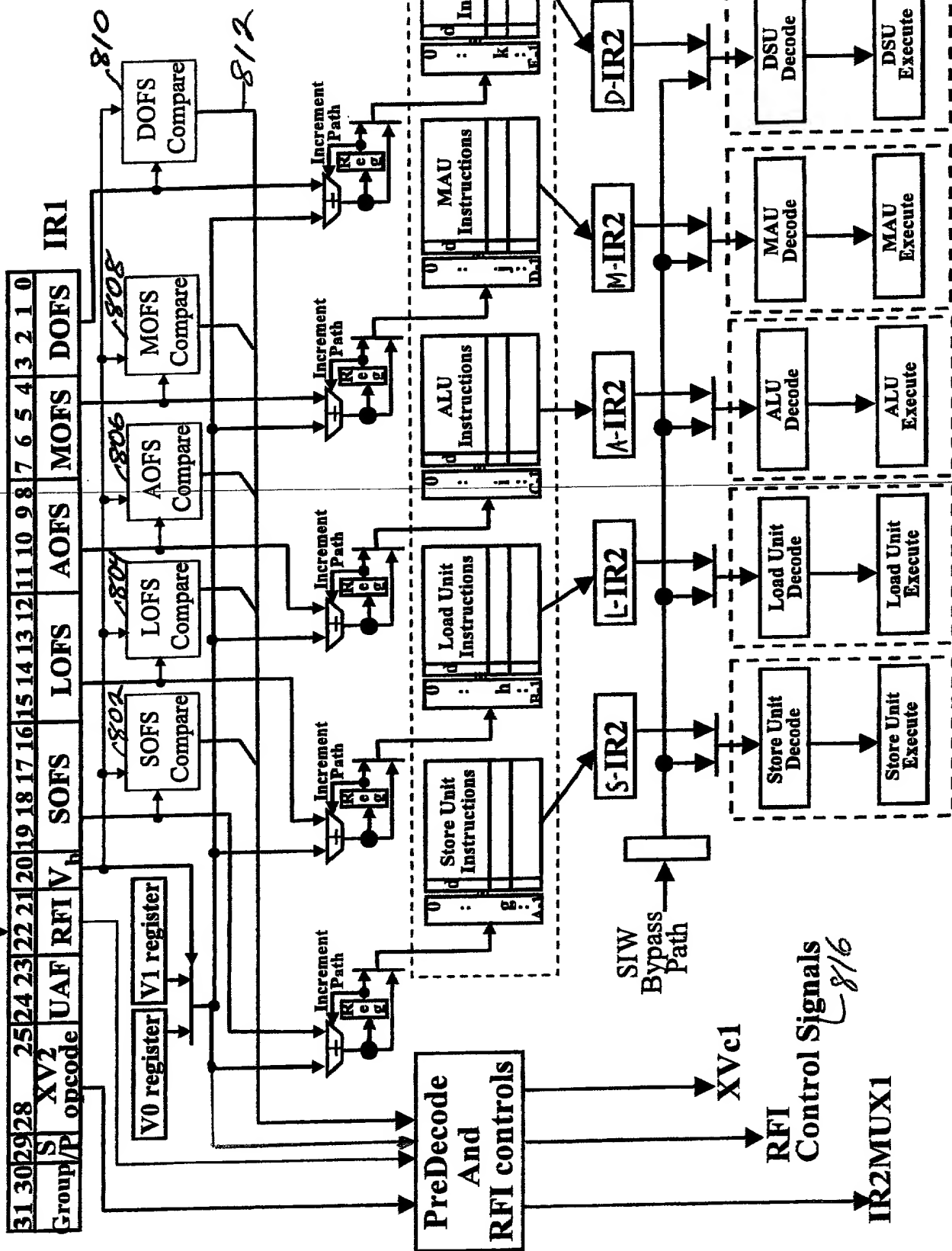


FIG. 8